

FRUMKIN, A.N.; FELOPOVA, A.I.; KROKHIN, A.I.; ...

Zinoviĭ Aleksandrovich Iofa; on his 70th birthday, 1895-  
Elektrokhimiia 1 no.5:620-621 My '65. (MIRA 18:6)

FEDOROVA, A. I.

USSR/Medicine - Phagocytosis

Jul/Aug 52

"The Temperature Coefficient of Phagocytosis,"  
N.V. Fuchkov and A.I. Fedorova, Chair of Animal  
Physiol, Moscow Tech Inst of Fish Ind in A. I.  
Mikoyan

Fiziol Zhur SSSR, No 4, Vol 38, pp 490-495

Human leucocytes as well as in those of cold-  
blooded animals show no phagocytosis at 0°C and  
below. Phagocytosis starts only at a temp slightly  
above zero. In human leucocytes and those of  
cold-blooded animals it increases with the increase  
of temp and reaches its highest point at 37°C in  
man and 30°C in frogs. In expts the const which

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characterizes the change in reaction rate (Arr-  
henius constant) was found to be approx the same  
in man and frogs. The temp coef of phagocytosis  
Q<sub>10</sub> for man equaled 2.6 between 20° and 30°C and  
1.7 bet 30° and 37°C. Q<sub>10</sub> reaches a max in cold-  
blooded animals at temps of 5-10°C, decreasing  
above this temp. The ability of human leucocytes  
to adhere to solid substances does not parallel  
the speed of phagocytosis. Received 6 Feb 49.

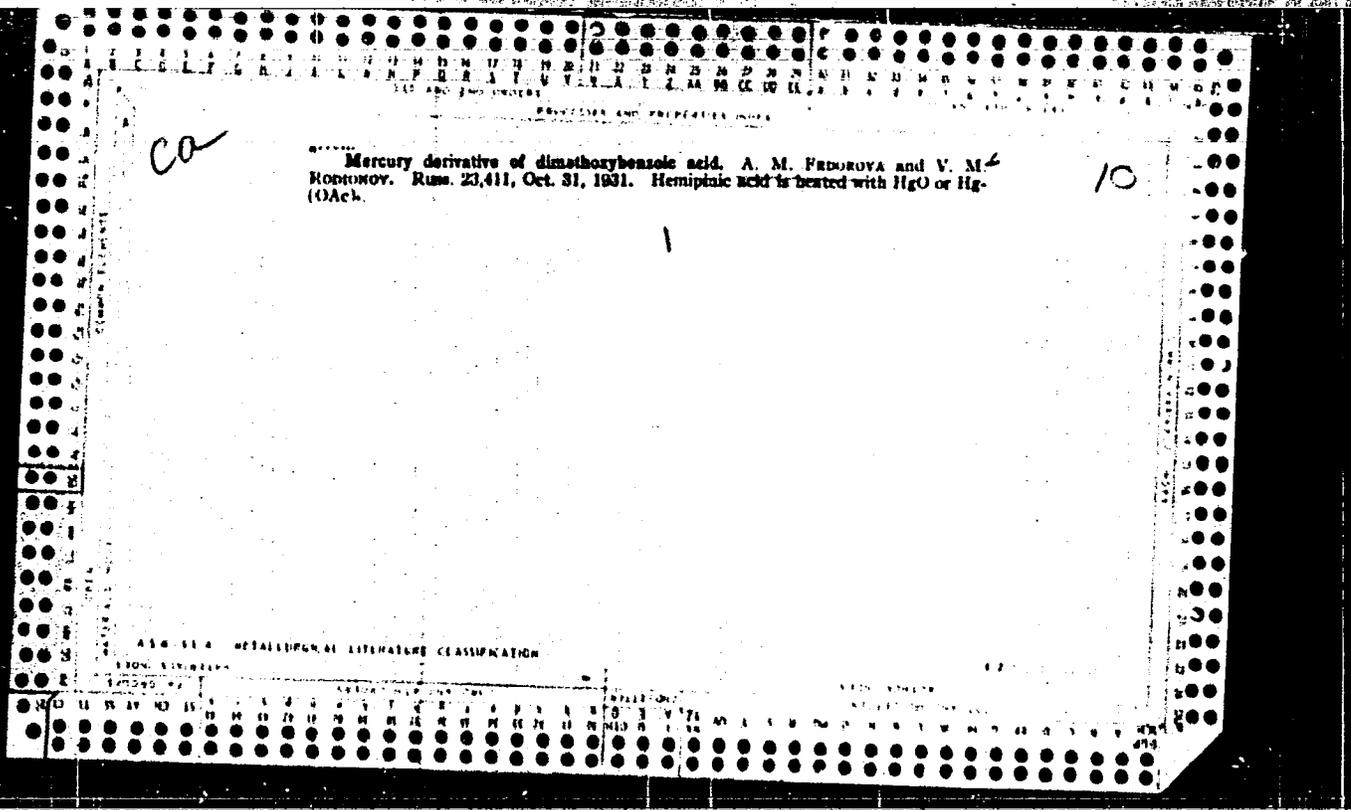
27339

DAVYDKOV, N.I., inzh.; FEDOROVA, A.M., inzh.

Calculating the economic efficiency of pulp flotation with  
preparation of two or three products. Obog. i brik. ugl. no.7:  
24-28 '58. (MIRA 12:7)  
(Coal preparation) (Flotation)

FEDOROVA, A.M., inzh.

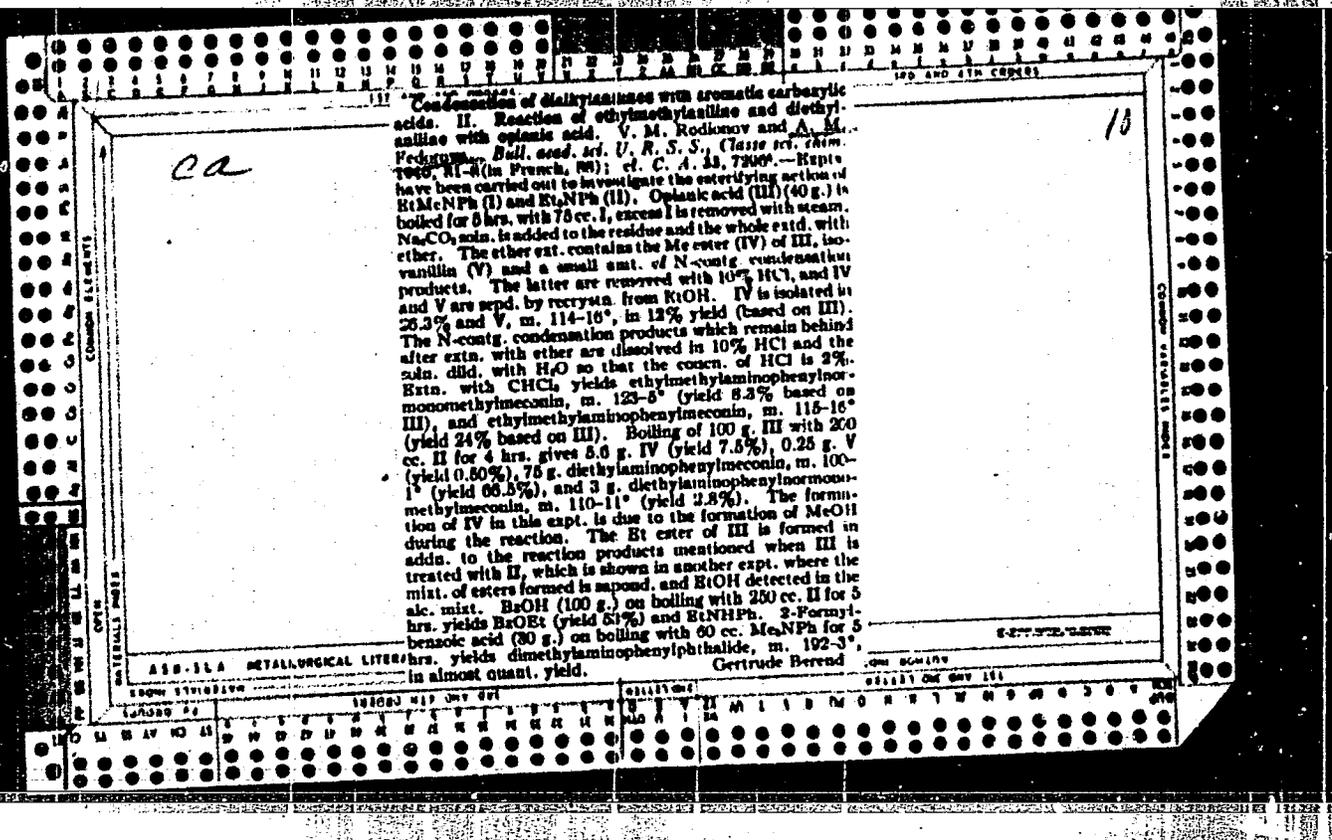
Testing new flotation reagents. Obog. i br. ugl. no. 7:38-45  
'58. (MIFA 12:7)  
(Flotation—Equipment and supplies) (Coal preparation)











Condensation of dialkylamines with carboxylic acids

III. The reaction of dimethyl- and diethylamines with hydroxybenzoic acids. V. M. Rodionov and A. M. Fedorova. *Dokl. akad. sci. U. R. S. S., Classe sci. chim.* 1940, 235-8; cf. C. A. 35, 2489. —In continuation of their previous work on reactions of dialkylamines with various aromatic carboxylic acids (*loc. cit.*), the authors studied the reaction of dimethyl- and diethylamines with hydroxybenzoic acids. It was found that *o*- and *p*-HO acids are quantitatively decarboxylated, while the *m*-acids yield the corresponding Me or Et esters, i. e. with PhNR<sub>2</sub> acting as an alkylating agent. In the course of the prepn. of *m*-HO-C<sub>6</sub>H<sub>4</sub>-CO<sub>2</sub>H for this work, it was established that its correct m. p. is 230-1°; the figure of 189°, which is given in both new and old editions of Beilstein, is apparently an odd error which has been inadvertently retained and should be corrected. Salicylic acid (100 g.) and PhNMe<sub>2</sub> (200 g.) were refluxed for 4 hrs., cooled, dissolved in HCl and extd. with Et<sub>2</sub>O; the latter, after washing with Na<sub>2</sub>CO<sub>3</sub>, was distd., yielding only PhOH (85 g. restd., b. 180-3°); the alk. wash liquor yielded only 0.5 g. salicylic acid. Refluxing a mixt. of 75 g. *p*-HO-C<sub>6</sub>H<sub>4</sub>-CO<sub>2</sub>H and 150 g. PhNMe<sub>2</sub> for 4 hrs. yielded, on working up as above, 37.5 g. (51%) PhOH. Refluxing a mixt. of 50 g. *m*-HO-C<sub>6</sub>H<sub>4</sub>-CO<sub>2</sub>H and 100 g. PhNMe<sub>2</sub> for 4.5 hrs., followed by steam distn. to remove unchanged amine, wash. of the residue in Et<sub>2</sub>O and washing the latter with Na<sub>2</sub>CO<sub>3</sub>, yielded 40 g. pure *m*-HO-C<sub>6</sub>H<sub>4</sub>-CO<sub>2</sub>H (from the alk. ext.) and 10.75 g. *Me m*-hydroxybenzoate, m. 69-70° (from benzene), which represents a 97.7% yield of the ester based on reacting acid. The same reaction with 100 g. PhNEt<sub>2</sub> (heating for 4 hrs.) yielded 24 g. unchanged acid and 20.7 g. (95%) *Et m*-hydroxybenzoate, m. 73-3°. Refluxing a mixt. of

30 g. *m*-MeO-C<sub>6</sub>H<sub>4</sub>-CO<sub>2</sub>H with 80 cc. PhNMe<sub>2</sub> yielded 24 g. unchanged acid and 2.5 g. (98%) *Me m*-methoxybenzoate, as a viscous oil. 2,5-HO(MeO)-C<sub>6</sub>H<sub>3</sub>-CO<sub>2</sub>H (40 g.) and 150 cc. PhNMe<sub>2</sub> were heated for 4 hrs. yielding 20 g. (98.4%) crude guaiacol (24.3 g. pure *o*-MeO-C<sub>6</sub>H<sub>4</sub>-OH). The 2,4-HO(MeO)-C<sub>6</sub>H<sub>3</sub>-CO<sub>2</sub>H was prepd. as follows: guaiacol was mixed with a triple amt. of well-heated K<sub>2</sub>CO<sub>3</sub> and heated at 170-80° under slight vacuum, cooled, treated with CO<sub>2</sub> at 2-2.5 atm. pressure and slowly heated to 180° with 0-8 atm. total pressure. the mixt. was dissolved in water, filtered and acidified by HCl, yielding the crude acid, which was recrystd. from water, from which it crystallizes with 1 mol. H<sub>2</sub>O, m. 150-2°; yield 63.5%. IV. Reaction of dimethyl- and diethylamines with arylacrylic acids. *Ibid.* 230-43. —In continuation of the above-reported work, the authors studied the reaction between dimethyl- and diethylamines with cinnamic acid (I), 3,4-dimethoxycinnamic acid (II), 3,4-methoxy-2-allylcinnamic acid (III) and mesocinnamic acid (IV). I (50 g.) and 100 g. PhNMe<sub>2</sub> heated for 4 hrs. at reflux yielded 44 g. unchanged acid, and 3 g. of a mixt. of styrene and Me cinnamate (about 1 g. styrene actually isolated). II (dimethylcaffeic acid) (5 g.) and 20 cc. PhNMe<sub>2</sub> treated as above gave an almost quant. recovery of the unchanged acid. III (25 g.) and 150 cc. PhNMe<sub>2</sub> were refluxed for 4 hrs., extd. with Et<sub>2</sub>O and filtered, yielding 10.3 g. (41%) unchanged acid; 9.1 g. more was obtained on washing the unchanged acid with Na<sub>2</sub>CO<sub>3</sub> and acidification. The Et<sub>2</sub>O ext. gave 1.3 g. (30%) *Me ester* of III, m. 65-6°. IV (50 g.) and PhNMe<sub>2</sub> (quantity not stated) were refluxed for 4-5 hrs.; PhNMe<sub>2</sub> was removed by steam distn. and the

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residue which crystd. on standing was filtered after treatment with  $\text{Et}_2\text{O}$  and  $\text{Na}_2\text{CO}_3$  soln. The filtered solid was the Me ester (V) of IV, m.  $122-3^\circ$  from  $\text{EtOH}$  (10.5 g. or 20%). On acidification of the alk. ext. there was obtained 3.5 g. of a solid, m.  $225-6^\circ$ , which had (by titration) a mol. wt. of 150, and corresponded to  $4,5\text{-MeO(HO)C}_6\text{H}_3\text{-CH}_2\text{-CH}_2\text{-CH}_3$ , but was not the known hesperetin, which m.  $207-7^\circ$ . The filtrate after isolation of this material yielded about 1 g. IV. The  $\text{Et}_2\text{O}$  soln. after removal of V was washed with  $\text{Na}_2\text{CO}_3$ , and acidification of the latter yielded 18.8 g. methylmeconin and 5.2 g. hesperetin on acidification by  $\text{HCl}$ ; the 2 were sepd. by soln. of the mixt. in  $\text{Et}_2\text{O}$  and shaken with dil.  $\text{NaOH}$ , which left only methylmeconin in the  $\text{Et}_2\text{O}$  layer. Similar reaction of 50 g. IV with  $\text{Ph-NH}_2$  yielded 7 g. V, 4 g.  $\text{Me ester}$  of IV, m.  $80-1^\circ$ , about 20 g. hesperetin, and 1 g.  $\text{Me ester}$ . There was no evidence of formation of methylmeconin, indicating that in this case the initial decarboxylation does not take place and that a deep-seated breakdown of the mol. occurs immediately with formation of hesperetin and its polymers. The formation of the Me ester is probably due to the action of  $\text{MeOH}$  formed on demethylation of 1 of the 2 MeO groups of IV.

G. V. Kozolapoff

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**Synthesis of the thioamide of meconincarboxylic acid.**  
 V. M. Rodionov and A. M. Fedotova. *J. Gen. Chem.* (U. S. S. R.) 11, 200(1941). To 40 g. opianic acid and 16 g. KCN in 180 ml. water, kept for 30-40 min., is added 180 ml. 18% HCl and the mixt. is boiled for 10-15 min. *β*-Cyanomocapic (I), m. 103-4°, seps. on cooling (yield 32 g. of recrystd. product). To 10 g. I dissolved in 100 ml. benzene is added 10 ml. astd. alc. NH<sub>3</sub> soln., then H<sub>2</sub>S is introduced for 1 hr. while cooling. The mixt. is kept for 3 hrs. in the cold and the formed *β*-meconincarboxylic acid thioamide, m. 100-5°, filtered off (yield 9.5 g.).  
 Gertrude Berend

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

LIT. AND CHEM. ABSTRACTS      PROCESSING AND PROPERTIES INDEX      MED. AND PH. ABSTRACTS

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**Interaction between dialkylmalonates and arylidicarboxylic acids. VI. V. M. Rodionov and A. M. Pedorova. *Russ. Acad. Sci. U. R. S. S., Class. Sci. Chem.* 1969:129-44 (English summary).—Phthalic acid (I, 20 g.) and terephthalic acid are unchanged after 4 hrs. boiling with (Ia) g. PhNMe<sub>2</sub> (II). The monoester of I is converted to I on boiling with II. Itersipic acid (III) under the same conditions remains chiefly unchanged but yields a small amt. of di-Me ester (1%) and isovanillic acid (IV 8%). The  $\alpha$ -ester of III, m. 149-50°, is obtained by boiling 60 g III with 60 cc. Ac<sub>2</sub>O for 10 min. and boiling the anhydride of III (m. 109-70°; yield 34 g. = 86%) formed (60 g.) with 400 cc. abs. MeOH for 4 hrs.; yield 42 g. The  $\beta$ -ester of III, m. 149-50°, is obtained by introducing HCl into a soln. of 25 g. III in 250 cc. abs. MeOH. The  $\alpha$ - and  $\beta$ -esters on boiling with II give IV in yields of 43 and 26.2% of the theory, resp.**

O. Berend

ASAC-ELA METALURGICAL LITERATURE CLASSIFICATION

LIT. AND CHEM. ABSTRACTS	PROCESSING AND PROPERTIES INDEX	MED. AND PH. ABSTRACTS
LIT. AND CHEM. ABSTRACTS	PROCESSING AND PROPERTIES INDEX	MED. AND PH. ABSTRACTS

PROCESSING AND PROPERTIES INDEX

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*ca*

Synthesis of dimethoxylated quinazolones. V. M. Radionov and A. M. Fedorova. *J. Gen. Chem. (U. S. S. R.)* 13, 240-43 (1962) [English summary].—3-Amino-3,4-dimethoxybenzoic acid (10 g.) was heated with 20 g. Ac<sub>2</sub>O to yield 91% of the corresponding dimethoxyacetyl-anthranil, m. 168-8°; attempts to recryst. this from AcOH led to hydrolysis to acetyldimethoxyanthranilic acid, m. 194-5°. The above anthranil (10 g.) in 80 cc. 12.5% NH<sub>4</sub>OH was evapor. to dryness, to yield 7.8-dimethoxy-3-methyl-4-quinazolone, m. 223-4° (from H<sub>2</sub>O); hydrochloride, m. 128-8°. 6-Amino-3,3-dimethoxybenzoic acid similarly given as *Ac. deriv.* of a dimethoxyanthranil, m. 114-15°; all attempts to convert it to a quinazolone failed, resulting in ring cleavage to acetyldimethoxyanthranilamide, m. 226-7°. Dimethoxyacetyl-anthranil (5 g.) heated to 120-20° with 4 g. Et<sub>3</sub>N(CH<sub>3</sub>), CHMeNH<sub>2</sub>, yielded 3-[6-(dimethylamino)-1-methyl-2-yl]-7,8-dimethoxy-3-methyl-4(7)-quinazolone-HCl, CH<sub>3</sub>-CH-C.CO.NCH<sub>3</sub>.

MeOC: C(OMe).C.N=CMe  
Me(CH<sub>3</sub>)<sub>2</sub>NH<sub>2</sub>.2HCl, m. 171-3° (from EtOH-Et<sub>2</sub>O).  
G. M. Kosolapoff

458-55A DETAILURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

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*ca*

Interaction of mono-, di-, and trichloroacetic acids with dimethylaniline. V. M. Rodionov and A. M. Fedoseeva. *Bull. acad. sci. U.R.S.S., Class sci. chim.* 1946, 33.

When boiled with  $NPhMe_2$ ,  $CH_2ClCO_2H$  remains unchanged,  $CHCl_2CO_2H$  gives a resin containing about 10%  $CH_2(C_6H_4NMe_2)_n$ , and  $CCl_3CO_2H$  reacts vigorously at  $60^\circ$  to give very pure  $CHCl_3$ . The last reaction may be used as a basis for a continuous process, possibly of tech. value, of prep.  $CHCl_3$ , since, after removal of  $CHCl_3$  by distn., the  $NPhMe_2$  may be used repeatedly.  $CHCl_2CO_2H$  (30 g.) is refluxed in  $NPhMe_2$  (I) (60 g.) 0.5 hr., the product washed with  $H_2O$ , and the insol. matter distd. in steam to remove the excess of I; the residue, recrystd. from  $EtOH$ , is  $CH_2(C_6H_4NMe_2)_n$  (6 g.).  $CCl_3CO_2H$  (60 g.) is mixed with I (120 g. ?),  $CO_2$  being liberated after a few min.; the mixt. is left 0.5 hr. from the termination of the vigorous reaction, and  $CHCl_3$  (88%) is then distd. off at  $66^\circ$ .

H. A.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

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Structure of 1-naphthaldehyde-8-carboxylic acid. V. M. Rodinov and A. M. Fedorova (Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1950, 247-52. -- 1-Naphthaldehyde-8-carboxylic acid (I) reacts with malonic acid,  $\text{Me}_2\text{NPh}$ , and  $\text{Ac}_2\text{O}$  ex-

clusively in the cyclic form,  $\text{C}_{10}\text{H}_7\text{CH}(\text{OH})\text{O}\text{CO}$ , thus indicating that I exists largely in this form in the tautomeric system with the normal open structure. Acenaphthene (80 g.) in 350 ml.  $\text{AcOH}$  treated at 95-100° with 225 g.  $\text{Na}_2\text{Cr}_2\text{O}_7$  at once (vigorous reaction), then with  $\text{H}_2\text{O}$ , filtered, extd. with hot 10%  $\text{Na}_2\text{CO}_3$ , and acidified, gave 16 g. naphthalic acid, m. 260°; the alkali-insol. ppt. boiled with 200 ml. 36%  $\text{NaHSO}_3$ , dild. with 400 ml.  $\text{H}_2\text{O}$ , boiled, filtered, and the insol. residue retreated as above, gave a filtrate which on acidification with  $\text{H}_2\text{SO}_4$  gave 36.5% acenaphthenequinone, m. 259-60°. This (25 g.) heated 1 hr. with 125 ml. 30%  $\text{KOH}$  up to 140°, treated with 100 ml.  $\text{H}_2\text{O}$ , kept 1 hr. at 140-50°, extd. with  $\text{H}_2\text{O}$ , and acidified to Congo red gave 60% I, m. 165-8°. Attempted condensation of I with malonic acid in the presence of  $\text{EtOH}\cdot\text{NH}_3$  failed. However, 20 g. I and 100 ml.  $\text{Me}_2\text{NPh}$  refluxed 4-5 hrs., made alk., steam-distd., treated with  $\text{HCl}$  to remove unchanged I (5.2 g.), and the alkali-insol. ppt. extd. with mineral acid ( $\text{HCl}$ ) gave 2 g. condensation product, m. 135-7°,

probably 1,8- $\text{C}_{10}\text{H}_7\text{CH}(\text{C}_6\text{H}_4\text{NMe}_2)\text{O}\text{CO}$ : the acid-insol. material (10.7 g.) was naphthalic anhydride, m. 240°. Similar refluxing of acenaphthenequinone with

$\text{Me}_2\text{NPh}$  gave 85% yellow 1,8- $\text{C}_{10}\text{H}_7\text{C}(\text{C}_6\text{H}_4\text{NMe}_2)_2\text{CO}$ , m. 201-2° (from  $\text{C}_6\text{H}_6$ ). Boiling 10 g. acenaphthenequinone, 5.8 g. malonic acid, and 40 ml. 5.5% aq.  $\text{NH}_3$  4-5 hrs. and treating with  $\text{Na}_2\text{CO}_3$  gave 4.5 g. alkali-sol.

1,8- $\text{C}_{10}\text{H}_7\text{C}(\text{CHCO}_2\text{H})_2\text{CO}$ , m. 166°, 2.5 g. acenaphthenequinone, and 6 g. 1,8- $\text{C}_{10}\text{H}_7\text{C}(\text{NH}_2\text{HCO})(\text{CH}_2\text{CO}_2\text{H})_2\text{CO}$ , m. 227-9° (from  $\text{EtOH}$ ). Slow distn. of 25 g.  $\text{NH}_3$  carbonate, 110 ml.  $\text{AcOH}$ , and 25 g. naphthalic acid yielded 98% naphthalimide, m. 310° (from  $\text{EtOH}$ ), after the usual washing with  $\text{H}_2\text{O}$ ,  $\text{Na}_2\text{CO}_3$ , and  $\text{H}_2\text{O}$ .

G. M. Kosolapoff

FEDOROVA, A. M.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
Organic Chemistry

Chem  
4  
Chemistry of pyrrolone derivatives. V. A. Rodionov  
and A. M. Fedorova. *Bull. Acad. Sci. U.S.S.R., Div.  
Chem. Sci.* 1952, 817-22 (Engl. translation).—See C.A. 48,  
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FEDCROVA, A. M. Chem.

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CATALYSTS

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Organic Chem.

Chem. ry of pyrazolone derivatives. V. M. Rodionov and A. Ya. Fedorova. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 1049-56. --To 200 ml. Na<sub>2</sub>SO<sub>4</sub> prepri. from 60 ml. 36% NaHSO<sub>4</sub> and 160 ml. 6% NaOH, was added 24.9 g. N-methoxycarbonyl-p-aminobenzenesulfonyl chloride (I); after shaking 2 hrs. with addn. of NaOH to maintain alkalinity the filtrate was acidified with 60% H<sub>2</sub>SO<sub>4</sub>, yielding 83.7% p-MeO<sub>2</sub>CHNC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>H, m. 142-5° (from H<sub>2</sub>O). This (16 g.) in 148 ml. warm 2.5% Na<sub>2</sub>CO<sub>3</sub> treated with 11.8 g. AgNO<sub>3</sub> in H<sub>2</sub>O gave 71.5% Ag salt, which refluxed 2 hrs. on steam bath with MeI gave 66% Me ester, m. 182-3°; the same forms in 53% yield through the K salt and MeI in MeOH; the K salt is obtained by evapn. of soln. of the acid in K<sub>2</sub>CO<sub>3</sub> soln. I (48 g.) in 200 ml. MeOH treated with MeONa, from 5 g. Na and 160 ml. MeOH, under 10° gave p-MeO<sub>2</sub>CNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Me, 80.6%, m. 115-16° (from MeOH); if NaOH is used in place of MeONa the yield drops to 60-6%. The ester (4.5 g.) and 3.5 g. 1-phenyl-3-methyl-2-pyrazolin-5-one heated 30 min. at 100°, dild. in H<sub>2</sub>O and extd. with Et<sub>2</sub>O gave on evapn. of

the aq. layer, extn. with EtOH and addn. of Et<sub>2</sub>O the crude adduct, m. 58-60°, 1-phenyl-3,3-dimethyl-5-oxo-2-pyrazolinium p-N-methoxycarbonylamino benzenesulfonate. I (25 g.) in 250 ml. Et<sub>2</sub>O treated with 100 g. NaHCO<sub>3</sub> followed by 5 g. NH<sub>2</sub>NH<sub>2</sub> in 45 ml. EtOH with cooling, gave 81% p-MeO<sub>2</sub>CNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHNH<sub>2</sub>, m. 170-3° (crude), m. 181-3° (decompn., from EtOH). This (4.9 g.) and 3 ml. AcCH<sub>3</sub>CO<sub>2</sub>Et in 30 ml. EtOH refluxed 1 hr., concd. and cooled, gave 80.5% p-methoxycarbonylamino phenyl 3-methyl-5-oxo-2-pyrazolin-1-yl sulfone, m. 156-8° (from EtOH). If the reaction is run with azeotropic removal of H<sub>2</sub>O in boiling MePh the yield is 90% and product, m. 158-60°. The above hydrazide refluxed 1 hr. with BzH in EtOH, gave 64.7% p-MeO<sub>2</sub>CNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHN:CHPh, m. 108-20°. Similar reaction with Me<sub>2</sub>CO in AcOH gave 43% p-MeO<sub>2</sub>CNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHN:CMc, m. 200-2° (from EtOH). Treatment of p-AcNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl with NH<sub>2</sub>NH<sub>2</sub>·H<sub>2</sub>O in EtO-MeOH 5 hrs. in presence of NaHCO<sub>3</sub>, as above, gave 105.5% p-AcNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHNH<sub>2</sub>, which (3 g.) refluxed with 1.7 ml. AcCH<sub>3</sub>CO<sub>2</sub>Et in dry C<sub>6</sub>H<sub>6</sub>, with continuous removal of H<sub>2</sub>O as azeotrope, gave 69% p-AcNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NHN:CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Et (II), m. 118-20° (from EtOH). To 65 g. AcCH<sub>3</sub>CO<sub>2</sub>Et in 130 ml. H<sub>2</sub>O was gradually added 27 ml. NH<sub>2</sub>NH<sub>2</sub>·H<sub>2</sub>O in 135 ml. H<sub>2</sub>O, then heated 0.5 hr. On cooling there was formed 77.5% 3-methyl-2-pyrazolin-5-one, m. 210-13°. Heating this with equimolar amount of p-AcNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl in C<sub>6</sub>H<sub>6</sub>N gave 30% p-acetylamino phenyl 3-methyl-5-oxo-2-pyrazolin-1-yl sulfone; in Me<sub>2</sub>CO the yield is 42%. For best result 7.85 g. 3-methyl-2-pyrazolin-5-one, 18.6 g. p-AcNHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl, 8 g. NaOAc and 100 ml. AcOH were refluxed 2 hrs., dild. with 200 ml. H<sub>2</sub>O and filtered, yielding 64.2% product, crystals (from 50% EtOH). Attempts to deacetylate this material with dil. HCl showed that even at 75° decompn. takes place. However, refluxing 3 g. of the compd. with 3 ml. 35% HCl in 30 ml. Me<sub>2</sub>CO 1 hr., followed by concn. and treatment with NH<sub>4</sub>OH and extn. with CHCl<sub>3</sub> gave 74% free amino analog, m. 152-5° (from aq. EtOH). Attempts to close the ring in II by heating under various conditions gave either no reaction or yielded noncrystallizable oils and tars. G. M. Kozolapov

FEDOROVA, A.M.

The work of the Academician V.M.Rodionov in the field of aldehyde  
carboxylic acids and their derivatives. Soob.o nauch.rab.chl.VKHO  
no.4:22-33 '54. (MIRA 10:10)

(Acids)

RODIONOV, Vladimir Mikhaylovich, akademik [deceased]; ZVORYKINA, V.K.,  
sostavitel'; KISELEVA, V.V., sostavitel'; FEDOROVA, A.M.,  
[translator]; KNUNYANTS, I.L., akademik, otv.red.; SHEMYAKIN, M.M.,  
akademik, otv.red.; SHVETSOV, Yu.B., red.isd.; POLENOVA, T.P.,  
tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR,  
1958. 792 p. (MIRA 12:2)

(Chemistry, Organic)

DAVYDKOV, N.I.; FEDOROVA, A.M.

Concerning R.A.Geguchadze and V.S.Kaminskii's article "On the cleaning of Georgian coals for coking." Koks i khim. no.9:58 '60.

(MIRA 13:9)

1. Nauchno-issledovatel'skiy institut Ugleobogashcheniya.  
(Coal preparation)  
(Geguchadze, R.A.) (Kaminskii, V.S.)

L 26533-66 EWT(1)/FDC GW

ACC NR: AT5028835

SOURCE CODE: UR/2667/65/000/030/0092/0101

AUTHOR: Mertsalova, O.B.; Pedorova, A.M.

ORG: none

TITLE: Correlation between temperature and pressure in the free atmosphere<sup>18</sup> over the northern hemisphereSOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy, no. 30, 1965. O korrelyatsionnykh zavisimostyakh temperatury i davleniya v svobodnoy atmosfere (Correlations of temperature and pressure in the free atmosphere), 92-101

TOPIC TAGS: free atmosphere, atmospheric pressure, atmospheric temperature, troposphere, stratosphere

ABSTRACT: To gain insight into the crosscorrelation between temperature and pressure in the troposphere and in the stratosphere, crosscorrelation coefficients between temperature and pressure were computed at the whole range of available altitude level data, from station ground level, to 25 - 28 km heights. The results are presented in form of graphs depicting isocorrelate lines (lines of equal crosscorrelation coefficients) as functions of temperature at a given height  $H_1$  (abscissa), and pressure at a desired pressure-correlating height  $H_2$  (ordinate). Graphs are presented for three representative latitude groups: Keflavik - northern; Rome - moderate and Aden - tropical. The basic relationships are clearly depicted in these graphs. All stations show zones

Card 1/3

L 26533-66

ACC NR: AT5028835

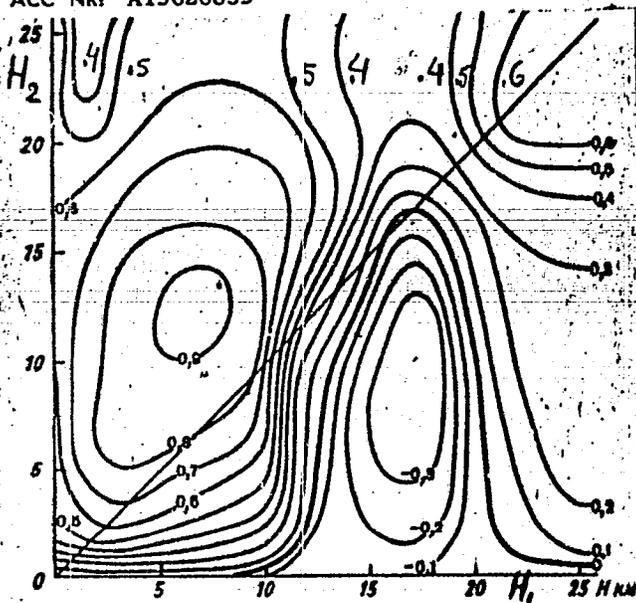


Fig. 1. Distribution of crosscorrelation coefficients between temperatures at height  $H_1$  and pressures at Height  $H_2$ . Rome, Summer.

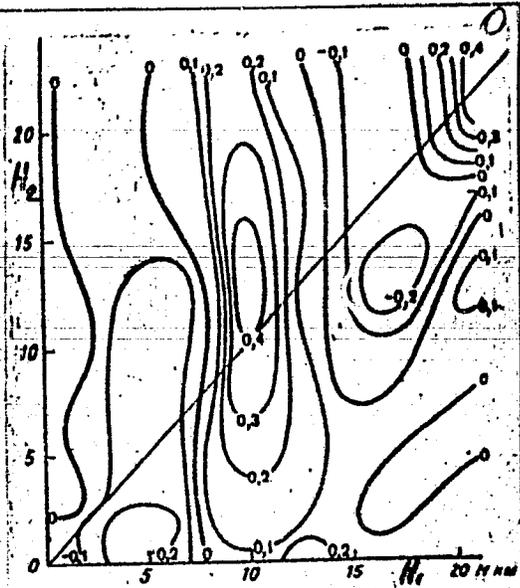


Fig. 2. Distributions of crosscorrelation coefficients between temperature at Height  $H_1$  and pressure at height  $H_2$ . Aden, Summer.

Card 2/3

L 26533-66

ACC NR: AT5026835

of high positive correlation coefficients in the troposphere (e.g. between temperature at 6km and pressure at 12 km for Rome, summer); there is a zero crossing zone and negative correlation for 10 km temperatures and all other pressures; there is a zone of high negative correlation; and a zone of substantial correlation in the stratosphere. Correlation coefficients between temperature and pressure at the same height are located in the graph on a 45 degree line. The isocorrelate graphs are similar for the northern and the moderate latitudes, but quite different for the tropical latitudes. This can be seen by comparing the graphs shown in Fig. 1 (Rome) and Fig. 2 (Aden). The authors discuss these and other features of the hemispheric crosscorrelation picture in detail, with the additional consideration of the influence of seasons. They also note that the crosscorrelation coefficients between temperature and pressure at equal altitudes never attain the high values found for the correlation of certain lower altitude temperatures with higher altitude pressures. In these latter cases crosscorrelation coefficients as high as .8 - .9 occur. Thus the temperatures appear to be more significantly related to higher and lower altitude pressures than to pressures at their own levels. Orig. art. has 4 figures.

SUB CODE: 04

SUBM DATE: 00

ORIG REF: C09

OTH REF: 003

Card 3/3 *CC*

KOSHELEV, Konstantin Vasil'yevich; DOLZHENKO, Vladimir Ivanovich;  
OSAULENKO, Ivan Yemel'yanovich; YATSENKO, Vladimir Dmitriyevich;  
KHANIN, Aleksey Mikhaylovich; FEDOROVA, A.M., red.; KRASOVSKIY,  
I.P., red. izd-va; LOMILINA, L.N., tekhn. red.

[Timbering permanent workings of deep shafts] Kreplenie kapital'nykh vyrabotok glubokikh gorizontov shakht. Pod red. A.M. Fedorova. Moskva, Gosgortekhnizdat, 1963. 75 p. (MIRA 16:7)  
(Mine timbering)

MERTSALOVA, O.B.; FEDOROVA, A.M.

Correlations between temperature and pressure in the free atmosphere  
over the northern hemisphere. Trudy NIIAK no.30:92-118 '65.  
(MIRA 18:12)

SHEVTSOVA, Z.N.; KULICHKINA, G.N.; FEDOROVA, A.N.

Solubility isotherms of the systems:  $\text{PrCl}_3\text{-KCl - H}_2\text{O}$  and  $\text{PrCl}_3\text{-NH}_4\text{Cl - H}_2\text{O}$  at 25 and 50°. *Izv. vys. ucheb. zav.; khim. i khim. tekh.* 4 no. 2:178-179 '61. (MIRA 14:5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Kafedra tekhnologii redkikh i rasseyannykh elementov. (Systems (Chemistry)) (Solubility)

FEDOROVA, A. N. (Editor)

"Dictionary on the Geology of Petroleum," State Publ. House for Sci.Tech. Lit.  
of Petroleum and Crude Oil, Moscow-Leningrad, 1952

"APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00041271

APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00041271

FEDOROVA, A.P. [Fedorova, H.P.]; KOROTKORUCHKO, V.P.

Isolation and study of the fractional nature of specific proteins  
of blood serums in carcinomatous rabbits and cancer patients.  
Ukr. biokhim. zhur. 36 no.5:654-664 '64.

(MIRA 18:6)

1. Institut biokhimii AN UkrSSR, Kiyev.

ACC NR: AP7002643 (A,N) SOURCE CODE: UR/0413/66/000/023/0237/0188

INVENTOR: Trusov, V. M.; Fedorova, A. P.

ORG: None

TITLE: A digital device for recording information from frequency meters. Class 42, No. 151888

SOURCE: Izobreteniya, promyshlennyye obratzysy, tovarnyye znaki, no. 23, 1966, 187-188

TOPIC TAGS: digital system, frequency meter

ABSTRACT: This Author's Certificate introduces a digital device for recording information from frequency meters. The unit contains a standard frequency pulse generator, a counter-divider, an output counter and a system of valves. The unit is designed for using a loop or electronic oscillograph as the code registration instrument. The output of the frequency meter is connected to the input of a counter-distributor which controls a commutator used for sequential connection of the loop (beam) of the oscillograph to all digits of the output counter.

SUB CODE: 09/ SUBM DATE: 02Mar62

Card 1/1

KROTKORUCHKO, V.P.; DVORNIKOVA, P.D.; ISHCHEKHO, I.N.; Primal uchastnye:  
FEDORCHENKO, Ye.Ya.; LEVRESHCHUK, L.N.; FEDOROVA, A.P.;  
MALINOVSKIY, Yu.I.

Activity of some glycolytic enzymes in the blood of patients with  
cancer. Vop. med. khim. 7 no.3:273-276 My-Je '61. (MIRA 15:3)

1. First Surgical Clinic of the "A.A. Bogomolets" Medical  
Institute, and Institute of Biochemistry of the Academy of  
Sciences of the Ukrainian S.S.R., Kiev.  
(CANCER) (GLYCOLYSIS)

KOROTKORUCHKO, V.P.; FEDOROVA, A.P. [Fedorova, H.P.]

Physicochemical properties of the serum proteins of rabbits with  
Brown-Fearce carcinoma. Ukr.biochim.zhur. 34 no.1:23-31 '62.  
(MIRA 17:5)

1. Institute of Biochemistry of the Academy of Sciences of the  
Ukrainian S.S.R., Kiyev.

UDEL'NOV, M.G.; FEDOROVA, A.P.

Work of the muscle trabecula as related to its initial  
length. Nauch. dokl. vys. shkoly; biol. nauki no.4:43-48  
'63. (MIRA 16:11)

1. Rekomendovana kafedroy fiziologii zivotnykh Moskovskogo  
gosudarstvennogo universiteta im. M.V.Lomonosova.

\*

UDEL'NOV, M.G.; FEDOROVA, A.P.

Work of the muscular trabecula in relation to stress and initial length. Biul. eksp. biol. i med. 56 no.8:3-7 Ag '63.

(MIRA 7:7)

1. Iz kafedry fiziologii zhivotnykh i cheloveka (zav. deystvitel'nyy chlen AMN SSSR prof. A.V. Lebedinskiy) Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova. Predstavleno deystvitel'nyy chlenom AMN SSSR A.V. Lebedinskim.

YATSIMIRSKIY, K.B.; BUDARIN, L.I.; BLAGOVESHCHENSKAYA, N.A.;  
SMIRNOVA, R.V.; FEDOROVA, A.P.; YATSIMIRSKIY, V.K.

Determination of microquantities of iodide by its catalytic  
action on thiocyanate oxidation reactions. Zhur. anal. khim.  
18 no.1:103-108 Ja '63. (MIRA 16:4)

1. Ivanovo Chemo-Technological Institute.  
(Iodides) (Thiocyanates) (Oxidation)

FEDOROVA, A.P.

Effect of necrotized tissue on the bioelectrical and mechanical activity of the trabecula. Vest. Mosk. un. Ser. 6aBiol. prosv. 18 no.3:18-24 My-Je'63 (MIRA 1967)

1. Kafedra fiziologii zhivotnykh Moskovskogo universiteta.

ROZENSHTRAUKH, L.V.; FEDOROVA, A.P.

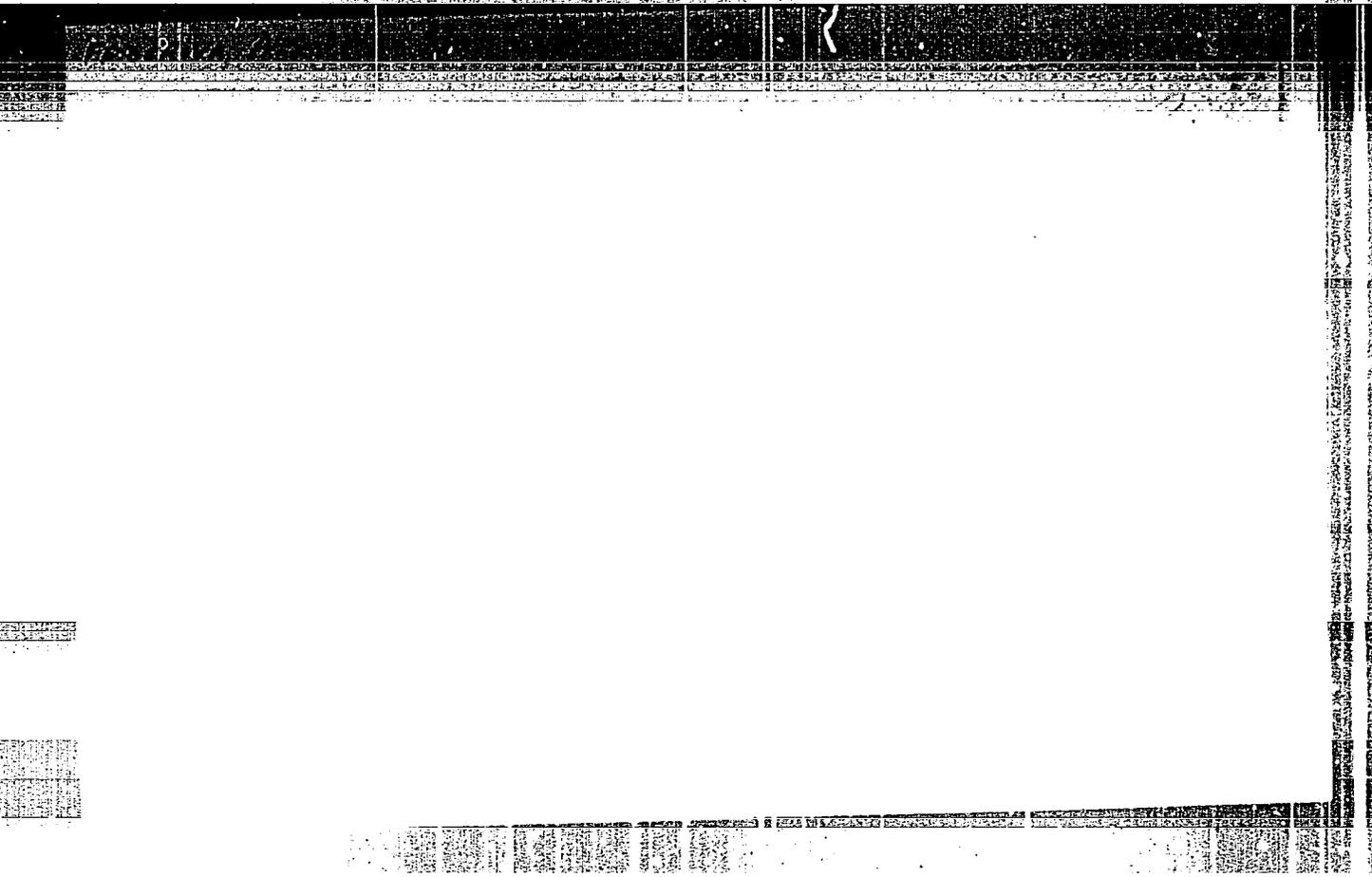
Mechanism of pharmacological cardioplegia. Biul. eksp. biol. i  
med. 56 no.9:65-69 S '63. (MIRA 17:10)

1. Iz kafedry fiziologii cheloveka i zivotnykh (zav. - deystvitel'nyy  
chlen AMN SSSR prof. A.V. Lebedinskiy) biologo-pochvennogo fakul'teta  
Moskovskogo gosudarstvennogo universiteta imeni Lomonosova. Predstav-  
lena deystvitel'nyim chlenom AMN SSSR A.V. Lebedinskim.

FEDOROVA, A.B.

Experience in using the polarographic method in the laboratory  
of the "Ukrzink" Plant. Zav. lab. 28 no.9:1147 '62.  
(MIRA 16:6)

1. Nachal'nik khimicheskoy laboratorii Konstantinovskogo  
zavoda Ukrzink.  
(Metals--Analysis) (Polarography)



FEDOROV, I.I., kand.med.nauk; FEDOROVA, A.S., kand.med.nauk

Clinical and roentgenological diagnosis of gastric burns. Sov.med.  
23 no.8:26-31 Ag '59. (MIRA 12:12)

1. Iz kafedry rentgenologii i radiologii (zav. - prof. V.A. D'yachenko)  
II Moskovskogo meditsinskogo instituta i terapevticheskogo otdeleniya  
TSentral'nogo instituta kurortologii (dir. G.N. Pospelova).

(CAUSTICS eff., inj.)  
(STOMACH diseases)  
(ESOPHAGUS diseases)

KORTEV, A.I.; doktor med.nauk; FEDOROVA, A.S.

Ornithosis in Sverdlovsk Province. Sov.med. 26 no.2:121, F'63.  
(MIRA 16:6)

1. Iz kafedry infektsionnykh bolezney (zav. - doktor med. nauk  
A.I.Kortev) Sverdlovskogo meditsinskogo instituta.  
(SVERDLOVSK PROVINCE—ORNITHOSIS)

FEDOROVA, A.V.; PETROV, A.A.

Chemistry of allene compounds. Part 4: Direction of the bromination and hydrobromination of asymmetric allene hydrocarbons. Zhur. ob. khim. 31 no. 11:3510-3515 N '61. (MIRA 14:11)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.  
(Propadiene) (Hydrocarbons) (Bromination)

FEDOROVA, A.V.; PETROV, A.A.

Conjugated systems. Part 165: Condensation of alkenyl allenes  
with maleic anhydride. Zhur.ob.khim. 32 no.11:3537-3540  
N '62. (MIRA 15:11)

1. Leningradskiy tekhnologicheskij institut imeni Lensoveta.  
(Propadiene)  
(Maleic anhydride)

FEDOROVA, A. V.

FEDOROVA, A. V.--"Histamine Content and the Activity of Histaminase and of True Cholinesterase of Blood and Lymph Under Normal Conditions and on Inflammation." (Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions)(29) Min Higher Education, Leningrad Veterinary Inst, Leningrad, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

\* For the Degree of Candidate in Veterinary Sciences

FEDOROVA, A.V.

KADYKOV, B.I.; FEDOROVA, A.V.

Formation of histaminase and its supply to the lymphatic system. Dokl. AN SSSR 110 no.6:1038-1040 0 '56. (MLRA 10:2)

1. Leningradskiy veterinarnyy institut. Predstavleno akademikom L.A. Orbelli.

(Histaminase)

USSR / General Problems of Pathology. Inflammation. U-1

Abs Jour: Ref Zhur-Biol., No 15, 1958, 70692.

Author : ~~Fedorova A.~~ V.  
Inst : Not given.  
Title : The Content of Histamine in the Blood and Lymph.  
The Activity of Histaminase and Cholinesterase in  
the Development of Experimentally Induced Inflammation.

Orig Pub: Byul, eksperim. biol. i meditsiny, 1957, 44, No 8,  
26-28.

Abstract: Inflammation was produced in cats by an introduction of turpentine in the intestinal walls and cavity (0.1 milliliter in 10 to 20 places). After three hours, and up to 10 days, a determination was made of the histamine content and of the activity of the histaminase and cholinesterase in the

Card 1/2

*Chair Pathological Physiology, Leningrad Vet Inst.*

USSR / General Problems of Pathology. Inflammation. U-1

Abs Jour: Ref Zhur-Biol., No 15, 1958, 70692.

Abstract: blood of the carotid artery and in the lymph of the thoracic duct. The content of histamine in the blood and lymph gradually increased, and reached a maximum in three days (260 and 182 percent respectively). In ten days, the concentration of histamine in the blood was higher than in the lymph (117 and 80 percent). The content of histamine in the blood and lymph changes at almost the same rate, and reaches a maximum in three hours (201 percent in the blood and 164 percent in the lymph). During the following days the activity of the histaminase decreased; yet it remained somewhat higher than normal. The activity of the cholinesterase decreased in the blood and lymph, especially after two to three days (49 and 50 percent of the original figure). -- I. A. Oyvin

Card 2/2

FEDOROVA, A.V., saslushennaya uchitel'nitsa shkoly RSFSR

Examination on cattle breeding is a new type of examination.  
Politekhnobuch. no.11:29-31 N '59. (MIRA 13:2)

1. Shilovskaya srednyaya shkola Ryazanskoy oblasti.  
(Shilovo (Ryazan Province)--Cattle breeding--Study and teaching)

FEDOROVA, A.V.

Diagnosis of brachial plexitis and neuralgias of the brachial plexus. Zhur.nevr.i psikh. 61 no.2:285-286 '61. (MIRA 14:6)

1. 10-ya Rishskaya gorodskaya poliklinika (glavnyy vrach L.M. Retenays).

(BRACHIAL PLEXUS—DISEASES) (NEURALGIA)

S/020/62/145/004/019/024  
B110/B144

AUTHORS: Fedorova, A. V., Stadnichuk, M. D., and Petrov, A. A.

TITLE: Addition of methyl dichlorosilane to allene hydrocarbons

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 4, 1962, 837 - 840

TEXT: The addition of methyl dichlorosilane to propyl and butyl allenes as well as to methyl propyl and methyl amyl allenes in the presence of  $H_2PtCl_6$  was investigated. The monoadducts were subjected to JR-spectral and ozonolytical analysis and to hydration. The effect of adding methyl dichlorosilane to olefins depends evidently on a nucleophilic mechanism whereby, firstly, the hydride ion attaches itself to the central atom of the allene system. Since the direction of addition is determined sterically, a 1,2-addition takes place in the case of monosubstituted allenes, but addition on the small radical in the case of disubstituted allenes. The properties of all monoadducts are listed (Table 2). There are 1 figure and 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskii institut im. Lensoveta  
Card 1/2 (Leningrad Technological Institute imeni Lensovet)

Addition of methyl dichlorosilane to ... S/020/62/145/004/019/024  
B110/B144

PRESENTED: March 9, 1962, by B. A. Arbuzov, Academician

SUBMITTED: March 4, 1962

Table 2. Legend: (1) substance (main product), (2) boiling point, °C,  
(3) pressure, mm.

Table 2

① Вещество (главный продукт)	② Т-ра кип., °C	③ Давление, мм	$n_D^{20}$	$n_D^{20}$
$C_6H_7-CH=CH-CH_2Si(CH_3)_2$	60-61	20	0,7563	1,4241
$C_6H_7-CH=CH-CH_2Si(CH_3)_2$	56-57	8	0,7683	1,4339
$C_6H_7-CH-CHSi(CH_3)_2$   CH <sub>3</sub>	50-51	6	0,7808	1,4430
$C_6H_7-CH=CH-CH_2Si(CH_3)_2$	81-82	6	0,7893	1,4450
$C_6H_7-CH=C-CH_2-C_6H_5 +$   HSi(CH <sub>3</sub> ) <sub>2</sub>	60-61	6	0,7805	1,4440

Card 2/2

FEDOROVA, A.V., starshiy nauchnyy sotrudnik; MINZOYAN, A.A., mladshiy  
nauchnyy sotrudnik

Effect of the chronic injection of strontium-90 on the sugar  
content of blood and glycogen in liver. Vop. radiobiol. [AN Arm.  
SSR.] 3/4:121-125 '63.

Effect of X-ray irradiation on the histamine content and histaminase  
activity of the blood and some tissues. Ibid.:127-132 '63.  
(MIRA 17:6)

PETROV, A.A.; FEDOROVA, A.V.

Allene hydrocarbons. Usp.khim. 33 no.1:3-27 Ja '64.

(MIRA 17:4)

1. Leningradskiy tekhnologicheskii institut imeni Lensoveta.

MIRONOV, V.Ye.; KUL'BA, F.Ya.; FEDOROV, V.A.; FEDOROVA, A.V.

Chloride complexes of bivalent lead. Zhur. neorg. khim. 9 no.9:  
2138-2141 S '64. (MIRA 17:11)

1. Leningradskiy tekhnologicheskij institut imeni Lensoвета,  
kafedra obshchey khimii.

FEDOROVA, A.V.

Acetylcholine content and cholinesterase activity in the blood  
of rats subjected to Sr<sup>90</sup>. Radiobiologiya 5 no.4:501-504 '65.  
(MIRA 18:9)

1. Leningradskiy nauchno-issledovatel'skiy institut radiatsionnoy  
gigiyeny.

FEDOROVA, A.V.

Content of histamine and activity of histaminase in the blood in chronic uptake of Sr90. Med. rad. 10 no.1:43-45 Ja '65. (MIRA 18:7)

1. Leningradskiy institut radiatsionnoy gigiyeny Ministerstva zdravoothraneniya RSFSR, Leningrad.

YEVDOKIMOV, S.A.; FEDOROVA, A.Ye.

Electronic stimulator for excitation with paired square impulses.  
Fiziol. zhur. 48 no.3:360-362 Mr '62. (MIRA 15:4)

1. From the I.P.Pavlov Institute of Physiology, Leningrad.  
(PHYSIOLOGY, EXPERIMENTAL—EQUIPMENT AND SUPPLIES)

ACCESSION NR: AP4024064

S/0048/64/028/002/0384/0387

AUTHOR: Višdgrub, G.S.; Dunayevskaya, H.V.; Fedorova, D.B.

TITLE: The FEU-56 photomultiplier tube Report, Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev 25 Jan to 2 Feb 1963

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 384-387

TOPIC TAGS: photomultiplier, photomultiplier characteristics, photomultiplier parameters, FEU-56, photomultiplier

ABSTRACT: The paper gives a description of the new Soviet photomultiplier designated the FEU-56 and the results of comparative measurements of the performance of this tube. The FEU-56 has an 80 mm diameter front window and an overall length of 125 mm. In general design it is similar to the FEU-52, and as in the case of the latter tube all the leads are brought out through the base (no side leads). In contrast to the FEU-52, however, the FEU-56 has an antimony-caesium photocathode on a transparent conducting backing. The basic parameters of the FEU-56 are listed in a table; it has 12 multiplication stages, its spectral sensitivity range extends from 3000 to 6500 Å with the peak at about 4000 Å. The operating characteristics are shown in curves

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ACCESSION NR: AP4024064

and compared with those of the FEU-24 and FEU-32. The amplitude resolution of the FEU-56 with an NaI crystal is 10-12%; the base pulse width is about 50 nanosec, the pulse rise time about 8 nanosec. The tests showed that the FEU-56 can operate satisfactorily under the conditions of a strong  $\gamma$ -background. Orig.art.has: 6 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: OO

DATE ACQ: 08Apr64

ENCL: OO

SUB CODE: GE

NR REF SOV: 004

OTHER: 000

Card 2/2

ACCESSION NR: AT4016867

S/2531/63/000/143/0003/0013

AUTHOR: Pyatygina, K. V.; Fedorova, E. A.; Blazhevich, V. G.

TITLE: Preliminary results of testing an ageostrophic method for precomputing the fields of wind, temperature and vertical currents

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy\*, no. 143, 1963  
Voprosy\* chislennogo prognoza i struktura meteorologicheskikh poley (Problems in numerical forecasting and structure of meteorological fields) 3-13

TOPIC TAGS: meteorology, wind, air temperature, atmospheric vertical currents, ageostrophic model, atmospheric pressure field, baroclinic model.

ABSTRACT: A report has been published giving the preliminary results of testing the method for precomputing the fields of wind, temperature and vertical currents in the atmosphere, using an ageostrophic model, originally proposed by Pyatygina (Trudy GGO, No. 121, 1961). Computations were made with a BESM-II computer. The initial data were the components of the geostrophic wind and temperature at 263 points on a European grid. Only three precomputations have thus far been made for 12- and 24-hour periods. The synoptic situation for the three cases is described. The precomputed and actual values for the wind field were compared for

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ACCESSION NO: AT4016867

the 97 inner points of the grid. The method for evaluating statistical errors is discussed. In the prediction of the wind field for 12 hours in advance the results were satisfactory for the 850- and 500-mb levels, with somewhat less error for the lower level. Errors are less than when the inertia method is used, particularly for the 850-mb level. The time interval used was 2 hours. This interval was unsatisfactory for a 24-hour prediction of the wind and temperature fields. Reduction of the interval to 1 hour for the four levels analyzed yielded satisfactory results for the 24-hour forecast for the 850- and 500-mb levels, but considerable error remained for the 300- and 200-mb levels; errors were prominent in the region of jet streams. Fig. 1 in Enclosure shows an example of the temperature forecast. The temperature field was computed on the basis of vertical velocities, which were precomputed successfully. Temperature prediction is more accurate than wind field prediction. Orig. art. has: 1 figure, 2 formulas, 9 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory)

Card 2/52

L 01453-66 EWT(1)/FCC GW

ACCESSION NR: AT5017065

UR/2531/65/000/168/0003/0013

AUTHOR: Pyatygina, K. V.; Blazhevich, V. G.; Fedorova, E. A.  
44,55 44,55 44,55

252  
B+1

TITLE: Results from testing of an ageostrophic model for predicting wind and temperature fields for several atmospheric levels

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 168, 1965, Chislennyy analiz i prognoz pogody (Numerical analysis and weather forecasting), 3-13

TOPIC TAGS: geostrophic wind, weather forecasting, atmospheric geopotential  
12,44,55

ABSTRACT: The results of 27 daily forecasts of wind and temperature fields for levels of 850, 500, 300 and 200 mb are analyzed. In contrast to earlier works, the temperature and wind fields were predicted using a system in Lagrange variables. The method used is briefly described. A high speed electronic computer was used for making the calculations. The initial data consisted of 333 values of geopotential and 263 temperature readings on each of the four levels studied. Tables are given showing the reliability of forecasts for geostrophic wind velocity and temperature variation. Predictions of wind velocity were much more accurate on the 850 and

Card 1/2

L 01453-66

ACCESSION NR: AT5017065

3

500 mb levels than on the 300 and 200 mb levels. The error was 5.5 m/sec for the 850 mb level, 8.0 m/sec for the 500 mb level, and about 13 m/sec for the other two levels. The absolute error in temperature prediction for the troposphere is 2° on the average. However, for the 200 mb level this error is considerably greater (3.2°). The coefficient of correlation between the actual and predicted temperature changes is highest for the 850 mb level, lowest for the 300 mb level. The data are compared with those of other authors. Orig. art. has: 2 figures, 10 formulas, 8 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory) 44,55

SUBMITTED: 00

ENCL: 00

SUB CODE: ES, DP

NO REF SOV: 009

OTHER: 000

Card 2/2

FEDOROVA, E. V.

KOMAROV, I.A.; FEDOROVA, E.V.

Anatomical structure of the shoot as a rooting capacity indicator  
for lilac cuttings. Biul. Glav. bot. sada no. 27:40-45 '57.  
(MLRA 10:5)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.  
(Lilac) (Plant cuttings) (Botany--Anatomy)

SHILLER-VOLKOVA, N.N.; KOICHINA, T.P.; NEVSKAYA, Ye.A.; ORLOV, N.I.;  
TROITSKAYA, I.B.; FEDOROVA, F.A.; MYASHNIKOVA, O.F.

Experience in the use of cytologic methods in preventive examinations  
of women. Akush. i gin. 40 no.4:72-74 JL-Ag '64.

(MIRA 18:4)

1. Gosudarstvennyy onkologicheskiy institut imeni Gertsena (dir. -  
prof. A.N.Navikov), Moskva i Rodil'nyy dom No.6 (glavnyy vrach I.V.  
Pavlova), Moskva.



VEDKOVA G.  
USSR/Cultivated Plants - Technical, Oligogenic, Sacchariferous. II-7  
Abs Jour : Ref Zhur - Biol., No 9, 1958, 39419  
Author : Fedorova, G., Berezovskaya, A.  
Inst : -  
Title : Monococious Hemp.  
Orig Pub : Sovkhoznoye proiz-vo, 1957, No 9, 68-69.  
Abstract : No abstract.

Card 1/1

1. USPENSKIY, A.; FEDOROVA, G.
2. USSR (600)
4. Poultry, Dressing of
7. Comparative evaluation of methods for killing poultry, Mias. ind. 24, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

FEDOROVA, G., vrach

Exercise therapy in vestibular vertigo. Zdorov'e 4 no.10:28-29  
0'58 (MIRA 11:11)

(VERTIGO)  
(EXERCISE THERAPY)

TEPINKICHIYEV, Vladimir Karpovich; FEDOROVA, G.A., red.; ZHEREBKOV, I.V.,  
red.izd-va; ABRAMOVA, Ye.A., tekhn.red.

[Program control of machine tools] Programnoe upravlenie  
stankami. Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1959.  
74 p. (MIRA 13:6)  
(Machine tools--Numerical control)

SOV/137-58-10-21483

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 146 (USSR)

AUTHORS: Abrikosov, N. Kh., Bankina, V. F., ~~Fedorova, G. A.~~

TITLE: Investigation of the Bi-Te System (Issledovaniye sistemy Bi-Te)

PERIODICAL: V sb.: Vopr. metallurgii i fiz. poluprovodnikov. Moscow,  
AN SSSR, 1957, pp 91-96

ABSTRACT: Ref. RZhMet, 1958, Nr 10, abstract 21482

1. Bismuth tellerium alloys--Analysis

Card 1/1

GROSHKO, B.B.; GRACHEVA, V.P.; RASTORGUYEVA, G.P.; RIKHTER, B.V.;  
FEDOROVA, G.A.

Meteorological observations in analyzing the industrial  
pollution of the ground layer of the atmosphere. Trudy GGO  
no.138:18-30 '63. (MIRA 17:2)

FEDOROVA, G. A.

PA 31/49T38

USSR/Medicine - Liver, Function Tests      Nov 48  
Medicine - Liver, Diseases

"Significance of Quick's Tests for Determining the Antitoxic Function of the Liver in Diseases of the Liver and Kidneys," G. A. Fedorova, Faculty Therapeutics Clinic, Sanitary Hygiene and Pediatrics Faculty, Tashkent Med Inst, 2 pp

"Klin Med" Vol XXVI, No 11

Investigates 65 cases. Concludes that in acute parenchymatous hepatitis there is considerable reduction in antitoxic function of liver. Kidney function remained normal except in one case of salvarsan hepatitis where there was 3.3% albumin in urine.

31/49T38

LAVRISHCHEVA, L.N.; FEDOROVA, G.A.; BELOV, V.N. [deceased]

Benzacridines. Part 1: Synthesis of 5-alkylamino-1,2-dihydro-3,4-benzacridines. Zhur.ob.khim. 33 no.12:3961-3964 D '63.(MIRA 17:3)

1. Moskovskiy khimiko-tekhnologicheskij institut imeni Mendeleyeva.

39961  
S/181/62/004/008/004/041  
B125/B104

26.2420

AUTHORS: Lyubin, V. M., and Fedorova, G. A.

TITLE: High-voltage photoelectromotive forces in layers of antimony triselenide

PERIODICAL: Fizika tverdogo tela, v. 4, no. 8, 1962, 2026-2030

TEXT: The spectral distribution of the photoeffect, its lag and its dependence on light intensity were measured with the same instruments that had been used by B. T. Kolomiyets and V. M. Lyubin (FTT, 1, 740, 1959). Antimony and selenium were fused to  $Sb_2Se_3$  in vacuo and condensed on glass or mica plates with platinum or Aquadag electrodes. The photo-voltage was measured with a tube electrometer of type ЭМУ-3 (EMU-3) or with electrostatic voltmeters of type С-95 (S-95). The photo-emf depends on the temperature  $t$  of the backing during condensation and also on the angle  $\theta$  of incidence of the molecular beam, and reached its highest value at  $\theta = 25-45^\circ$  and  $t \approx 300^\circ C$ . A strong photo-emf can arise only in crystalline samples, and a weak one only in amorphous samples. The photo-emf, which does not arise near an electrode, increases in proportion

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High-voltage photoelectromotive...

S/181/62/004/006/004/041  
B125/B104

to the electrode spacing. The photo-emf produced by frontal illumination with white light may have different signs even if the illuminated samples are produced under equal conditions. The volt-ampere characteristics recorded in light and in the dark are linear up to electric field strengths of  $10^4$  v/cm. Both the rise and the decay times of the photo-emf are  $10^{-4}$  sec at most and have no long-time components. The photo-emf of many samples rises very steeply at first. The photocurrent increases in proportion to the light intensity; the photo-emf, however, tends to saturation, and its sign very often changes when white light is incident through the glass backing. The holes are the predominant carriers. Considerable photovoltage (20-30 v/cm) also occurs in  $Sb_2S_3$ ,  $Sb_2S_3 \cdot Sb_2S_3$  (p-type semiconductors),  $Sb_2S_3 \cdot Bi_2S_3$ , and  $2 Sb_2S_3 \cdot Bi_2S_3$  (n-type semiconductors). In the case of frontal illumination, the spectral properties of the photovoltage of high-efficient and low-efficient layers are almost the same (Fig. 4). There are 6 figures. X

SUBMITTED: February 15, 1962

Card 2/02

89023

S/O20/60/135/004/018/037  
B019/B077

AUTHORS: Lyubin, V. M., and Fedorova, G. A.

TITLE: The Problem of High-voltage Photo-electromotive Forces in Thin Semiconducting Layers

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 4, pp. 833-836

TEXT: The authors present the results of a study of high-voltage photo-emf in layers of CdTe and of some antimony and bismuth halides. The initial material was cadmium telluride which is available as a luminescent powder under the trade-mark "ohisty" ("pure"), or is obtained by melting the necessary portions of Cd and Te. Evaporation on glass or mica was done in a graphite container. In all layers produced by this method, a photo-emf of up to 80 - 100 v/cm was established, and some layers showed values of up to 150 - 180 v/cm at room temperature. The magnitude of the photo-emf was a function of the layer thickness, the temperature of the base, and the manufacturing process. A layer thickness of  $d \approx 1.5 \mu$  and a base temperature of about  $300^\circ\text{C}$  were found to be most favorable; the resistivity of the layer was  $10^7 - 10^8$  ohm.cm. These investigations showed that CdTe can be

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89023

The Problem of High-voltage Photo-electro-  
motive Forces in Thin Semiconducting Layers

S/020/60/135/004/018/037  
B019/B077

used in television devices. It was found that the sign of the photo-emf can be different even when using equal manufacturing methods. No change of sign was established when the interval between container and base was kept small during the production. The origin of a high-voltage photo-emf is explained by a photo current which might pass through the layer during evaporation and separate the ionized impurities. Tests did not confirm this theory. In different spectral ranges different signs of photo-emf were found; and test results indicated the existence of sublayers which complicate the explanation of high-voltage photo-emf. Practically the same results were obtained for the photo-emf of binary and ternary layers of antimony and bismuth produced in the same way as the CdTe layers. There are 2 figures, 2 tables, and 8 references: 4 Soviet and 4 US. x

PRESENTED: June 20, 1960, by A. F. Ioffe, Academician

SUBMITTED: June 10, 1960

Card 2/2

GARANIN, I.L.; GORDOV, G.P.; FEDOROVA, G.A.

Obtaining cyclohexane by the hydrogenation of benzene. *Khim. i tekhn. topl. i masal* 9 no.7:28-31 J1 '64.

(MIRA 17:12)

1. Krasnodarskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

FEDOROVA, G.A.

Methods for separating and determining vitamin P-like substances.  
Vit. res. i ikh isp. no.4:189-194 '59. (MIRA 14:12)

1. Vseroyuznyy vitaminnyy institut.  
(VITAMINS--P) (DRUGS--ADULTERATION AND ANALYSIS)

DEVYATNIN, V.A.; SOLUNINA, I.A.; FEDOROVA, G.A.; MEL'NIKOVA, Ye.Ya.;  
SAMSONOVA, G.S.; ZHELTOVA, I.S.

Vitamin loss in cooking. Trudy VNIVI 8:93-96 '61. (MIRA 14:9)

1. Khimiko-analiticheskaya laboratoriya Vsesoyuznogo nauchno-  
issledovatel'skogo vitaminnogo instituta.  
(Vitamins)

DEVYATNIN, V.A.; FEDOROVA, G.A.

Application of colorimetry in determining vitamin B<sub>6</sub> in poly-vitamin preparations. Trudy VNIVI 8:97-102 '61. (MIRA 14:9)

1. Khimiko-analiticheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo vitaminnogo instituta.  
(Colorimetry) (Pyridoxine)

L 04603-67 EWT(1)/EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GG/AT/NH  
 ACC NR: AP6033819 (N) SOURCE CODE: UR/0289/66/000/002/0051/0058

AUTHOR: Tsukerman, V. G.; Lyubin, V. M.; Vaynshteyn, E. Ye.; Fedorova, G. A. 6/3

ORG: Institute of Inorganic Chemistry, Siberian Department, AN SSSR, Novosibirsk  
 (Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR)

TITLE: Photoelectric property of the selenium-arsenic-thallium semiconductor films 18  
 in the x-ray spectral region 21 21 21

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 2, 1966, 51-58

TOPIC TAGS: semiconductor film, arsenic selenide, thallium, arsenic, ~~photoconductive~~ photoconductive film, x ray photography, TV tube, PHOTOELECTRIC PROPERTY, X RAY SPECTRUM, SELENIUM

ABSTRACT: The effect of thallium addition on the photoconductivity of amorphous selenium-arsenic semiconductor films, 0.3-7 μ thick, has been studied extensively in view of the expected improvement in photoelectric property of Se-As films. The first experimental data of the authors on the Se-As-Tl films were published elsewhere [FTT, 1965]. The films of  $Tl_2Se \cdot 10As_2Se_3$ ;  $Tl_2Se \cdot 2As_2Se_3$ ;  $Tl_2Se \cdot As_2Se_3$ ;  $2Tl_2Se \cdot As_2Se_3$ ; and  $3Tl_2Se \cdot As_2Se_3$  were deposited on various substrates by vacuum vaporization. The  $Tl_2Se \cdot As_2Se_3$  films were found to be the most promising in application in the x-ray spectral region and displayed greater photoeffect than the best thallium-free films in the visible spectral region. Radiosensitivity of the

Card 1/2 UDC: 541.123.3+546.23'19'683

L 04603-67

ACC NR: AP6033819

$Tl_2Se \cdot As_2Se_3$  films versus thickness and preparation technique, x-ray dosimetric and volt-ampere characteristics, kinetics and spectral distribution in the 0.5—1.5 A range of x-ray conductivity of the films were determined, as well as the quantum yield of the photoconductive effect and the energy of formation of a single electron-hole pair. A vidicon-type camera tube, photoconductive in the visible and x-ray spectral regions, was constructed with a  $Tl_2Se \cdot As_2Se_3$  film deposited on a beryllium face plate as a target. The first experiments with such a vidicon tube showed a short rise time (of the order of tenths of a second) of the system and the feasibility of visualization of the x-ray pictures and of measurement of the radiation intensity in different areas of the target. Orig. art. has: 8 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: 30Jul65/ ORIG REF: 017/ ATD PRESS: 5100

Card

2/2

*hh*

FEDOROVA, G.A.

Chromatographic separation and determination of pyrocatechol.  
Gidroliz. i lesokhim. prom. 18 no.5:17-18 '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni  
V.I.Lenina.

ACC NR: AP6034753

(A)

SOURCE CODE: UR/0020/66/170/005/1052/1055

AUTHOR: Vaynshteyn, E. Ye. (deceased); Lyubin, V. M.; Fedorova, G. A.; Tsukerman, V.G.

ORG: Institute of Inorganic Chemistry, Siberian Department, Academy of Sciences SSSR (Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR); Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, Academy of Sciences SSSR (Institut geokhimii i analiticheskoy khimii Akademii nauk SSSR)

TITLE: Some singularities of the internal photoeffect in layers of the Se-As-Tl system in the visible and x-ray regions of the spectrum

SOURCE: AN SSSR. Doklady, v. 170, no. 5, 1966, 1052-1055

TOPIC TAGS: selenium compound, arsenic compound optic material, thallium containing alloy, internal photoeffect, photoconductivity, x ray effect

ABSTRACT: The authors report the first results of attempts to increase the photoconductivity of Se-As thin semiconducting layers by introducing thallium. The raw material of the Se-As-Tl system was synthesized by fusing selenium, arsenic, and thallium in vacuum, and the investigated films were prepared by evaporation in vacuum by a method close to that described by the authors earlier (FTT v. 4, 401, 1962). The electrodes were tin dioxide and aluminum. The compositions of the layers investigated were  $Tl_2Se \cdot 10As_2Se_3$ ,  $Tl_2Se \cdot 2As_2Se_3$ ,  $Tl_2Se \cdot As_2Se_3$ ,  $2Tl_2Se \cdot As_2Se_3$ , and  $3Tl_2Se \cdot As_2Se_3$ . The layer thickness ranged from 0.5 to 7  $\mu$ . The conductivity and photoconductivity were investigated by a method described in the earlier paper (and in Pribori i tekhnika

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UDC: 537.312.5

ACC NR: AF6034753

eksperimenta, no. 6, 192, 1965). An increase in the thallium concentration reduced the dark resistance and shifted the spectral characteristics of the photoeffect toward the long-wave region. The greatest sensitivity was observed in  $Tl_2Se \cdot As_2Se_3$ . The x-ray sensitivity was practically constant in the range 0.5 - 1.5 Å, and then increased slowly with increasing x-ray wavelength. The photoeffect depends on the polarity of the voltage applied. At negative potential on the tin-dioxide electrode the spectrum has a single maximum near 350 - 370 nm and depends little on the thickness of the layer. For positive potential, maxima appear both at short and long wavelengths (near 600 nm) and shift toward longer wavelength with increasing thickness. The results are interpreted from the point of view of the processes that occur in the regions near the electrodes. The dark current increased faster than linearly with increasing applied voltage, but the photocurrent exhibited rapid saturation. The quantum yield ranged from 800 to 1400 electrons/quantum and the ionization energy required to produce a single electron-hole pair is 5.7 - 10 ev, close in value to that obtained for many photoconductors sensitive to x-radiation. It is concluded that the Se-As-Tl system can serve as an effective photoconductor for both the visible and the x-ray regions. This report was presented by Academician V. V. Voyevodskiy 14 January 1966. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 20Dec65/ ORIG REF: 011

Card 2/2

Qualitative decomposition of azoaldehyde of quinoline hydrochloride  
number 1.1.1.1.1

1-0ERL (9)

*Handwritten mark*

SHISHKIN, P.N., starshiy nauchnyy sotrudnik; KADYSEVA, Ye.A., kand.med.nauk;  
FEDOROVA, G.B., vrach

Treatment of seborrhea of the scalp with sulsen. Vest.derm.1  
ven. no.7:49-50 '61. (MIRA 15:5)

1. Iz Ufimskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo  
instituta (dir. - starshiy nauchnyy sotrudnik P.N. Shishkin),  
kafedry kozhnykh bolezney (zav. - prof. G.S. Maskimov) Bashkirskogo  
meditsinskogo instituta i mikologicheskoy detskoy bol'nitsy  
(glavnyy vrach M.Kh. Malyshev).

(SELENIUM SULFIDE--THERAPEUTIC USE) (SCALP--DISEASES)

KRUGLYAK, Ye. B.; MEZENTSEV, A. S.; BORISOVA, V. N.; FEDOROVA, G. B.; BRAZHNIKOVA, M. G.

"Characterization of some olivomycin derivatives and decomposition products."

report submitted for Antibiotics Cong, Prague, 15-19 Jun 64.

Inst for Search of New Antibiotics, ANS USSR, Moscow.

BRAZHNIKOVA, M.G.; KRUGLYAK, Y.,B.; BORISOVA, V.N.; FEDOROVA, G.B.

Study of olivomycin homogeneity. Antibiotiki 9 no.2:141-146  
F '64. (MIRA 17:12)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

MEZENTSEV, A.S.; KRUGLYAK, Ye.B.; BORISOVA, V.N.; FLOROVA, G.B.; BRAZHNIKOVA, M.G.

Production of some olivomycin derivatives and their physicochemical characteristics. Antibiotiki 10 no.5:410-414 My '65.

(MIRA 18:6)

1. Institut po izyskaniyu novykh antibiotiko AMN SSSR, Moskva.

STROYKOVA, N.G.; IVANOVA, L.V.; FEDOROVA, G.D.

Method of determining the content of total lipids and  
cholesterol in the aorta of rabbits. Trudy Inst. klin. i  
eksper. kard. AN Gruz. SSR 8:137-139 '63. (I RA 17:7)

1. Institut eksperimental'noy meditsiny AMN SSSR. Leningrad.

1 SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. SV. 11. 1986. No. 6. S. 6A86

D. G. Gerasimov, N. G. Plutas, V. S. Fedorova, G. F.

Defining the optimal settings of controllers in cascade automatic control systems on a simulating assembly

Abstract. Zh. Avtomatiz. khim. proizvodstva. 1986. No. 10. S. 14-15.

Keywords: automatic control system

Summary: A simulating assembly was employed to determine the optimal cascade control system parameters for a process with a dead time.

... AR 5014\* 60

... pneumatic controllers of the MA 3 type

... CODE, IF

ENCL: 00

... 2 2

FEDOROVA, G. G.

"Fracture of the Ramus Mandibuli," Stomatologiya, No.1, 1952

FEDOROVA, G. G.

"Survey of Work Conducted in 1951 by the Dentofacial Department of the Moscow Central Institute of Traumatology and Orthopedics," Stomatol., No.2, 1952

FEDOROVA, G.S.

Closed fractures of the ramus mandibuli and a method of their  
treatment. Trudy TSU 64:207-213 '63. (MIRA 17:5)

FEDOROVA, G. G.  
ca

15

The effectiveness of  $\beta$ -naphthol rings against *Grapholitha pomonella*. G. G. Fedorova. *Sobremennye* 1940, No. 2, 27. — Each of the  $\beta$ -naphthol rings which were made around apple trees contained 0-10 dead larvae of *G. pomonella* at one time and a total of 473 dead larvae during the whole period. Insulating layers of clay and thick milk of lime were used to prevent the burning of the trees and of their roots by solar oil which is a component of the  $\beta$ -naphthol rings. Trunks of all trees around which the  $\beta$ -naphthol rings are made are preliminarily painted with lime. W. R. Henn

ASNT-51A METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

FEDOROVA, G. G. 59

Study of Structures of Metallic Films Obtained on the Surface of Aqueous Solutions of Metallic Salts by the Effect of Regenerator-Cases (original text in Russian), N. N. Buzinov, N. V. Demenev, A. S. Shoor, and G. G. Fedorova; Colloidal Journal (USSR) Sep-Oct '49 (11-8 Bi-Metal); pp 269-288; 18 illus.

The article proves that the structure of platinum films varies in its thickness and depends upon the period of regeneration. The initial stages of regeneration produce films consisting of separate elementary crystalline particles. Increased periods of regeneration yield thicker films, consisting of complete units. The films obtained in all cases were porous, consisting of units of variable dimensions. It was also found that the units forming the film have an exceptionally developed surface and are formed by the method of coagulation of elementary crystalline particles. The external appearance of the units during long periods of regeneration is similar to porous platinum. The coagulation of the crystal line particles

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